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Short Sale Brokerage Listings for Distressed Residential Properties

ABSTRACT

Short sale brokerage listings for residential homes increased 37 fold in Omaha, Nebraska from 2003 to 2008, which closely mirrors increases in notice of default (foreclosure) filings. Only 38% of short sale listings actually sold and 70% were originally financed with 100% loan-to-value ratios and/or recently used as collateral for home equity loans. Short sale homes were physically similar to other sold homes but took twice as long to sell and in 2007 and 2008 had price discounts ranging from 8.5% (from comparable sales analyses) to 10.3% (based on a hedonic price model).

I. INTRODUCTION

The current U.S. residential housing crisis that is characterized by rapidly declining prices and increasing mortgage defaults has lead to the advent of a new type of real estate brokerage listing: the 'short sale listing'. This listing implies is that a selling price for a property will be less than it's original purchase price and, in most cases, the outstanding mortgage balance on the property. A short sale needs to be agreed to by mortgagors due to the commonly used due-on-sale clause of most mortgages underwritten in the U.S. Mortgagors usually only approve a short sale on mortgages after requiring home owners (sellers) demonstrate financial hardship. As well, mortgagors frequently require that short sale homes be listed for sale on the open market for a reasonable period of time and may limit (reduce) the amount of brokerage commissions paid to participating real estate brokers. This reduced brokerage commission along with the fact that short sale purchases may take longer to close than conventional sales is the primary reason why most multiple listing services (MLS's) in the U.S. require listing

agents to formally state the possibility of short sale in the realtor text column of all listings (to warn buyer agents and potential buyers of potential problems). However, it has also been observed that some real estate agents utilize the 'short sale' designation in listings that are available to the public as an advertising tool to attract bargain hunters to distressed and/or bargain-priced properties.

A short sale which avoids a foreclosure, may be advantageous to all the parties involved: Homeowners can potentially suffer less blight on their credit reports with a short sale in comparison to a foreclosure, and, as a result of the Mortgage Forgiveness Debt Relief Act of 2007, forgiven mortgage debt is no longer a tax liability. As well, mortgagors can avoid the legal, possessory (holding), and selling costs associated with foreclosed properties while buyers can potentially purchase a home for a discount, and real estate agents can potentially receive a sales commission during a relatively low sales volume period.

Short sales have become a hot button topic among realtors nationwide. A National Association of Realtors online survey of 3,530 member agents in April of 2008 found that 40% of realtors were involved in a short sale in the prior year, that their involvement was evenly split among buyer and seller agents, and that short sale listings were most common in states with the highest volatility in housing prices and foreclosures, namely Nevada, Arizona, Florida and California (Chomproopet, 2008). Another NAR survey of realtors determined that 87% of realtors faced impediments by lenders or loan servicers in agreeing to short sale offers in a timely manner (Freeman, 2008). Other common realtor concerns regarding short sale listings are associated with the disclosure of the short sale listing status in the MLS to warn buyer agents that commissions might be

lower than those associated with conventional sales, and whether distressed (short sale) sellers may fail to disclose property defects (Moncrief, 2008).

Short sales have the potential to reduce the number and impact of judicial foreclosures in residential property markets nationwide but more information regarding the extent and impacts of this relatively new type of transaction is needed. In particular, a better understanding of the frequency and characteristics of short sales is expected to be of interest to home buyers and sellers, mortgage lenders and loan servicers, real estate brokers and appraisers. It is assumed that an increased knowledge and understanding of this newly emerging option to sell distressed real estate will improve the efficiency of such transactions.

The following three inter-related questions are addressed in this paper: 1) To what extent have short sales been increasing in the last few years and what percentages of short sale listings are actually sold through this process? 2) What are the physical characteristics and mortgage types (loan to value ratios) of homes sold through short sale listings? 3) What are the price discounts associated with short sales?

These research issues are evaluated by cross-referencing short sale listings within a multiple listing service (MLS) database with publicly available transaction, loan origination, and foreclosure default notice data over the 2003 to 2008 time period. The frequency and success of short sale listings are quantified and evaluated with respect to housing characteristics and mortgage originations, and compared to overall sale volumes and foreclosures over time. As well, the impact of short sales on the sale price of properties is estimated using two alternative approaches--comparable sales analyses and hedonic price modeling. The study area is Omaha, Nebraska, a midsized, Midwestern city

which has experienced relatively moderate housing price appreciation and mortgage defaults over the last decade.

II. PREVIOUS LITERATURE

Short sales with respect to residential real estate are a relatively recent phenomenon associated with the 2007-2008 U.S. housing market crisis and current discussion is therefore missing from real estate literature. That is, short sales are not discussed in a comprehensive literature review of real estate brokerage by Benjamin, Jud and Sirmans (2000) or in the more recent assessment of mortgage termination research by Lacour-Little (2008). However, much of the past research that has focused both on brokerage listings and/or mortgage defaults can to some extent be extrapolated to short sales.

Two particular real estate brokerage research topics with direct relevance to short sale listings are market timing and listing comments that identify distressed sales. Market timing or duration measured by the days on market (DOM) statistic is closely related to short sale listings because short sales are intended to be relatively quick in order to avoid foreclosure action. Some prior studies have demonstrated a positive relationship between listing duration (time on market) and sale prices (e.g., Asabare and Huffman, 1993), while others find no statistically significant differences in prices of homes selling quickly versus normal marketing times (Sirmans, Turnbull and Dombroa, 1995). Two more recent studies have demonstrated that marketing time must be considered together with seller motivation, property attributes and location, and while market time does have a positive impact on sale prices, it also decreased the probability of sales (Anglin, 2006 and Johnson, Benefield, and Wiley, 2007).

Past research on the impact of listing comments on residential sales is also useful in understanding short sales. A hedonic price study by Haag, Rutherford and Thomson (2000) found that the inclusion of the word 'foreclosure' in listing comments decreased selling prices by 16% but had no increase on marketing time while the use of the words 'motivated seller' reduced sale prices by 4% while increasing marketing times by 15%.

Several of the factors shown to influence the likelihood of mortgage defaults (summarized by Lacour-Little, 2008) are also likely to influence the probability of homeowners seeking a short sale. In particular, homeowner equity, which is closely related to loan-to-value ratios (LTVs), measures the percentage of a home purchase price met by the loan and is likely to be the major factor influencing a homeowner to resort to a short sale.

Price discounts associated with foreclosures have been estimated in prior studies. Most of these studies have used hedonic price models and have found that foreclosure status reduces the sale prices of homes by between 22% and 24% (Shilling, Benjamin and Sirmans, 1990; Forgey, Rutherford and VanBuskirk, 1994; and Hardin and Wolverton, 1996). However, one study found no price discount associated with foreclosures (Carroll, Clauritie and Neill, 1997) and another study, which used repeat-sale price appreciation indexes, determined a price discount of 22% among foreclosed properties nationwide (Pennington, 2006). Likely reasons for discounted sale prices of foreclosed properties include: the stigmatization and/or possible property damage and a lack of maintenance associated with foreclosed properties (Harding, Miceli and Sirmans, 2000), and the high holding costs of non-performing assets which leads to the need for short marketing periods.

Based on the previous literature, it is hypothesized that short sale purchase offers would be made by buyers at below market prices (for distressed properties) and yet accepted by mortgagors only when the value of these offers exceed likely prices that they would receive when selling the properties under the foreclosed status. Therefore, the price discounts of short sales in Omaha are expected to be between 4% and 24% of the price of comparable properties.

III. APPROACHES AND DATA

Short sale listings were identified by querying the comments (text) fields of listing information within the Greater Omaha multiple listing service (MLS) database over the January 1, 2000 to October 31, 2008 period. In particular, the word 'short sale' was searched for in all listings over this time period. Since the Omaha MLS requires listing agents to note the existence of all potential short sales, it is expected that the majority of short sale listings over this time period were identified. However, what was likely not captured were housing sales not listed as short sales at the outset but which subsequently became short sales.

Short sale listings were then classified by whether or not they actually sold, and then short sales were cross-referenced with publicly available property transactions, and mortgage origination filings for Douglas County (where 76% of Omaha area sales occur). Information regarding the generalized types of mortgages (conventional, cash, FHA, or VA) used to purchase short sale properties (prior to the short sale) were based on MLS data. Loan-to-value ratios associated with original property purchases, and the existence of either refinancing and/or home equity loans (again all prior to the dates of observed

short sales) were obtained by cross referencing short sale owners/addresses with loan origination filings.

The only relevant information missing from this intensive cross-referencing exercise is the interest rate associated with the original mortgage (prior to the short sale), and hence the outstanding loan amounts at the time of the short sale. The only way such information could be obtained would be from the lien holders or owners of individual properties, who, in most cases, consider this to be proprietary and/or confidential information.

With the available information, the following data queries and analyses were performed in order to get a better understanding of the extent of short sales: 1) A classification of the frequency of short sale listings, short sales, all MLS sales, foreclosure filings from the 2000 to October 31, 2008 time period; 2) An evaluation of the housing characteristics, market duration, and general mortgage types of short sales; 3) Quantifying the holding periods (time between loan originations and short sales), original loan to value ratios (loan amount divided by sale price), and incidences of refinancing, home equity loans, associated with short sales.

The second component of this research involved quantifying the price discounts associated with short sales using two alternative approaches (comparable sales and hedonic price modeling). The comparable sales approach was intended to mimic conventional appraisals by comparing the sale price of sold short sale listings on a square foot basis (sale price divided by finished above grade square feet of the home) to corresponding comparable sale values. Between two and five comparable sales were selected for each short sale based on the following criteria: Identical house style (ranch,

raised ranch, 2-story, 1.5 story, multi-level, or split entry); close proximity (within a one-mile radius and within the same school districts); age (sold year minus built year), within four years; size (finished above grade square footage), not to differ by more than 20%; date of sale within the three months prior to or after the short sale; and arms-length transactions (assumed to occur for all MLS sales among persons with different last names). Resulting comparable sale values (dollars per square foot of AGLA) were then averaged across comparables associated with a particular short sale (using both mean and median statistics) and then compared to the price per square foot of each short sale property. Although this approach does not involve a complete and traditional comparable sales-based appraisal (where most if not all individual features of homes are adjusted for), it is expected to generate reasonably accurate price discounts associated with short sales.

Alternatively, a hedonic price model was estimated for all MLS home sales in Omaha over the 2007 to October, 31, 2008 time period. This two-year time period is used in order to capture the period when the majority of shorts sales were known to have taken place. The geographical focus is the MLS regions that contained short sales. The model specifies the natural log of adjusted sale price (sales price minus seller concessions) to be a function of the structural characteristics of the home (style, size, and other relevant physical features, as well as location factors), a time variable indicating the year a property sold, and a dummy variable S indicating whether a home was SHORT SALE LISTING. The resulting model is:

$$Ln\ Price_i = \beta_0 + \sum_{j=1}^{J} \beta F_{jij} + \sum_{k=1}^{K} \beta_k T_{ik} + \beta_S S_i + \varepsilon .$$

The dependent variable (adjusted sale price) is logged in order to facilitate the direct interpretation of explanatory variables on a percentage basis. Structural

explanatory variables include: the age, size and style of homes (measured using dummy variables), along with the number of bathrooms, fireplaces (a strong indicator of amenities housing quality in the Omaha market), and garage stalls. Dichotomous (dummy) variables were also used to account whether or not home were on larger than average lots (between .25 and 1 acre), were located in the Omaha Public School (OPS) district which is generally considered to be less desirable than the more suburban school districts, and finally, whether a home was sold in 2008.

IV. RESULTS

A) The Frequency and Characteristics of Short Sale Listings and Sales

No short sale listings were contained within Omaha MLS prior to 2003 and only a handful appeared between 2003 and 2006 (Table 1). However, a relatively large number of short sale listings (126) occurred in 2007 followed by 153 additional listings in 2008 (as of October, 31). This corresponds to a 3,725% (37 fold) increase in short sale listings over this 5 year time period. There is a strong positive relationship between the number of foreclosure default filings and short sales over this time period. Only 38% of short sale listings actually sold over the 2003 to 2008 time period and it is likely that these non-sales were a result of purchase offers being rejected by lien holders, owners resolving the default status of a mortgage prior to a short sale, or the listing still becoming inactive (due to a lack of offers). Most (99%) short sales were held for a least one year prior to the sale which indicates that most were owner-occupied rather than being investment properties. Finally, short sale listings and sales are geographically dispersed throughout the Omaha area but due to their relative infrequency, they do not occur within every MLS region.

Table 1. The Extent of Short Sales in Omaha (2003-2008)

	Homes Sold	Foreclosure Default Notices*		Short Sale Listings	Short Sales
		n	%**		
2003	8,711	770	0.47%	4	2
2004	8,693	821	0.50%	6	4
2005	9,065	914	0.56%	7	1
2006	8,674	1,084	0.66%	19	5
2007	8,053	1,597	0.97%	126	42
2008 (Oct. 31)	5,708	1,294	0.79%	153	67
2003-08	48,904	6,480	3.95%	315	121 (38%)

* Foreclosure default notices are for Douglas County (where 76% of Omaha sales occur)
** Foreclosure percentages are based on an estimate of 164,000 home sales in the county

Short sales from 2003 to 2008 ranged from $30,000 to $308,000 with a mean value of $130,000 and a median value of $119,000. Over the 2007 to October, 2008 time period, the median short sale price was $120,000 which is about 19% lower than other sale prices over this time period (in the same MLS regions). However, much of this price discount is likely due to the fact that short sale homes were, on average, smaller and were more often split-entry homes that took twice as long to sell as measured by days on market (Table 2).

The original mortgages associated with short sales had a higher proportion of government assisted (FHA and VA) loans compared to other sales (Table 3). And, a very high proportion of short sales were originally purchased with high loan to value ratios (70% were purchased with 100% financing), and many (54%) were refinanced prior to the short sale, and 26% were used as collateral for home equity loans. In light of the relatively mild property value depreciation observed in the Omaha market over the 2000

to 2008 time period (overall average city-wide annual appreciation was 4% between 2000 and 2007 and a fell by only 3% between 2007 and 2008), it would appear that highly leveraged homeownership rather than sharply declining housing prices appears to be the reason why homeowners are opting for short sales in this market. This is further supported by the fact that the median time between the most recent loan originations and short sales was 39 months. In other words, long-time homeowners with substantial home equity are not as likely to rely on short sales.

Table 2. Short Sale Characteristics (2007-2008)*

	Short Sales (n =109)	Other Sales (n =13,255)
Median Sales Price	$120,000	$144,000
Median Sale Price per Above Grad Square Footage	$91	$106
Median Sales Price as Percentage of Listing Price	97%	98%
Median Days on Market	83	42
Median Age (Years)	30	26
% Ranch Style	20%	30%
% Raised Ranch Style	7%	7%
% 2-Story Style	24%	24%
% Multi-Level Style	15%	12%
% Split-Entry Style	31%	16%
Median Finished Above Grade Square Feet	1,286	1,439
Median Finished Basement Square Feet	377	422
Median Bathrooms	2	2
Median # Fireplaces	1	1
Median # Garage Stalls	2	2
% Homes with Larger than Average Lot Sizes (.25 to 1 acre)	.10	.29

* *Only in MLS regions where short sales occurred.*

Table 3. Mortgage Characteristics of Sold Short Sales

Loan Types (general)	**Frequency**	
	Short Sales	Other Sales
Conventional	55%	69%
FHA	19%	14%
VA	11%	7%
Other	15%	10%
Loan-to-Value Ratios	**Among 53 Short Sales with Data**	
100% (Including 80/20 Loans)*	70%	
95%	16%	
90%	8%	
80% or Lower	6%	
Refinancing	54%	
Home Equity Loans	26%	

**An 80/20 loan is where two separate loans are originated, one for the down payment.*

B) Short Sale Price Discounts Based on Comparable Sales

At least two comparable sales were obtained for each short sale and four suitable (highly similar) comparables were obtained for the majority the short sales. Over the 2003-2008 time period the median price difference between short sales and comparables ranged from -48% to 34% with a mean difference of -7.8% and a median difference of -8.1% (with a standard deviation of 12.6%). Over the 2007-2008 time period, the median price discount for short sales was 8.5%. These comparables sales-based price discount estimates did not appear to vary with regards to housing styles, size, price, or geographic location.

C) Short Sale Price Discounts Based on Hedonic Price Models

The hedonic price model used to quantify the discounts associated with short sales during the 2007-2008 period is summarized in Tables 4 and 5. The model has an adjusted R^2 value of 0.78 and all of the explanatory variable is statistically significant with the expected coefficient signs. Similarly, the F-statistic is statistically significant from zero indicating that all of the explanatory variables considered jointly have a statistically significant influence on the sale price of homes. From this it can be seen that short sales, at least during the 2007 to 2008 time-period, sell for 10.3% less than otherwise similar homes.

Table 4. Summary Statistics for the Hedonic Price Model to Measure the Impact of Short Sale Listings on Sale Prices, 2007-2008 (N= 12,078)

Variable	Description	Mean	Std. Dev.
PRICE	Dependent variable: sale price while accounting accounts for seller costs	162,425	99,121
Log (PRICE)	Log of sale price	11.85	.548
D_Short_Sale	Whether a sale was a short sale listing	.009	.094
D_OPS	Whether a sold home in the Omaha Public School System	.50	.50
AGE	Age at time of sale (years)	36.2	29.8
D_RANCH	Whether a home was a ranch style	.46	.49
D_SPLIT	Whether a home was split entry style	.1781	.3826
D_2STORY	Whether a home was a 2-story style	.2235	.4166
F_AG_SFT	Above grade finished square feet	1,620	702
F_Base_SFT	Finished basement sqft	422	445
BATHS	# of baths	2.4	.98
D_BigLot	Whether a homes lot is larger than average (>.25 to 1 acre)	.21	.41
GARAGES	# of garage stalls	1.81	.84
FIREPLACES	# of fireplaces	.75	.69
D_2008	If home sold in 2008	.42	.49

Table 5. Hedonic Regression Results: The Determination of Housing Sale Prices in Areas with Short Sale Listings (2007-2008)

Explanatory Variable	Coefficient	Std. Err.	t-statistic	P>t
short_sale	-.1032112	.0249988	-4.13	0.000
d_ops	-.0502577	.0054699	-9.19	0.000
age	-.003729	.0001164	-32.04	0.000
dx_ranch	.0367193	.0079699	4.61	0.000
d_split	.0246847	.0086716	2.85	0.004
d_2story	-.0173504	.0093061	-1.86	0.062
baths	.0605086	.0047072	12.85	0.000
ag_sf	.0003232	7.21e-06	44.85	0.000
base_f_sf	.0001889	7.31e-06	25.85	0.000
d_biglot	.0336689	.0067218	5.01	0.000
garage_spaces	.1075571	.0042861	25.09	0.000
num_fireplaces	.0795981	.0045758	17.40	0.000
d_2008	-.0342442	.0047772	-7.17	0.000
Constant	11.00675	.0136337	807.32	0.000

V. CONCLUSION

This research has provided a great deal of information on a rapidly emerging type of brokerage listing for distressed residential real estate. Homeowners using short sale listings are likely to be those with relatively low to non-existent equity in their homes (those who purchased homes with high loan-to-value ratios and/or received recent home equity loans). Future research should evaluate what percentage of homeowners receiving foreclosure default notices actually utilize short sale listings. It would also be useful to know more detailed characteristics of the mortgages associated with short sales such as whether they were sub-prime, adjustable rate, or Alt-A mortgages, and the particular reasons why most (62%) short sale listings did not actually sell.

This research has accurately quantified the price discount associated with short sale listings using two alternative approaches and is thus expected to facilitate future

short sales by assisting homeowners and realtors in accurately pricing financially distressed properties, and by providing mortgagors with an objective assessment of the likely market value of such properties. Future research should quantify price discounts associated with foreclosed properties which would further assist mortgagor decision making with regard to short sale purchase offers. As well, future research should determine differences between short sale listing and short sale prices (i.e. price discounts associated with properties that were not intentionally short sales but which later became short sales). Such analyses are only possible in market where the local MLS notes the existence of both short sale listings and all short sales. Finally, It would be prudent for this research to be replicated in other regions of the country, particularly in areas that have experienced more pronounced housing price declines and foreclosures than observed in the Omaha market.

VI. REFERNCES

Anglin, P.M. Value and Liquidity Under Changing Market Conditions. *Journal of Housing Economics*, 2006, 15:4, 293-304.

Asabare, P.K., and F.E. Huffman. Price Concessions, Time on the Market and the Actual Sale Price of Homes. *Journal of Real Estate and Economics*, 1993, 6(2), 167-74.

Benjamin, J.D., D. Jud and G. S. Sirmans. Real Estate Brokerage and the Housing Market: An Annotated Bibliography. *Journal of Real Estate Research*, 2000, 20(1), 216-278.

Carroll, T., T. Clauritie and H. Neill. Effect of Foreclosure Status on Residential Selling Price: Comment. *Journal of Real Estate Research*, 1997, 13:1, 95–102.

Chomproopet, W. Short Sale and Foreclosure Overview. National Association of Realtors (online commentary, September, 2008). Available from: http://www.realtor.org/research/commentary_short_sales

Forgey, F., R. Rutherford and M. VanBuskirk. Effect of Foreclosure Status on Residential Selling Price. *Journal of Real Estate Research*, 1994, 9:3, 313–18.

Freedman, R.. Short Sales: Coming up Short? *REALTOR Magazine*. August, 2008. http://realtor.org/rmonews_and_commentary/articles/2008/0909shortsales.

Haag, J.T., R.C. Rutherford, and T.A. Thomson.. Real Estate Agent Remarks: Help of Hype? *Journal of Real Estate Research*, 2000, 20(1/2), 205-215.

Hardin, W. and M. Wolverton. The Relationship Between Foreclosure Status and Apartment Price. *Journal of Real Estate Research*, 1996, 12:1, 101–09.

Harding, J., T. Miceli, and C.F. Sirmans. Do Owners take Better Care of their Housing than Renter? *Real Estate Economics*, 2000, 28:4, 663-81.

Johnson, K.H. J.D. Benefield, and J.A. Wiley. The Probability of Sale for Residential Real Estate. *Journal of Housing Research*, 2008, 16(2): 131-142.

Montcrieff. S. Are You Sidestepping Short Sales? *REALTOR Magazine*. August, 2008. http://realtor.org/rmonews_and_commentary/opinion/080editor.

Lacour-Little, M. Mortgage Terminination Risk: A Review of the Recent Literature. *Journal of Real Estate Literature*, 2008, 16(3), 297-326.

Pennington-Cross, A. The Value of Foreclosed Property. *Journal of Real Estate Research*, 2006, 28(2): 194-214.

Shilling, J., J. Benjamin and C. F. Sirmans. Estimating Net Realizable Value for Distressed Real Estate. *Journal of Real Estate Research*, 1990, 5:1, 129–40.

Sirmans, Turnbull and Dombroa. Quicker House Sales: Seller Mistake or Luck? *Journal of Housing Economics*, 1995(3): 230-43.